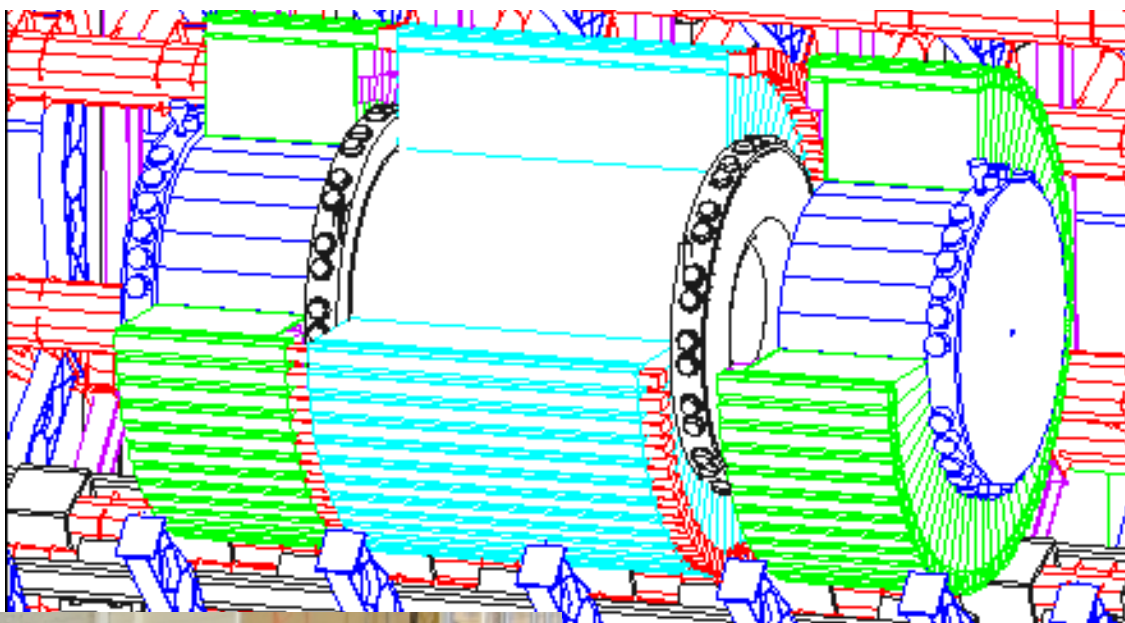


U.S. ATLAS Project Progress- 1st Quarter FY02

Below- A representation of the ATLAS Hadron Tile Calorimeter, showing central barrel section (blue) and two extended barrel sections (green). Each section is made up of many wedge-shaped modules, with the modules themselves comprised of sub-modules. The calorimeter sub-modules are made up of steel plates separated by scintillating plastic tiles. Particles interact with the steel to produce showers that induce photon emissions from the tiles. This light is proportional to incident energy, and is recorded by Photo-Multiplier Tubes surrounding the outer calorimeter.



Sub-module production involves many steps, such as gluing, pressing, and welding of the plates and layers. At left is a pressing machine used by the University of Illinois Urbana-Champaign (UIUC) for sub-module production.

Below are some finished UIUC sub-modules. UIUC has completed 193 sub-modules, enough for 1/3 of the modules in a single extended barrel. UIUC is also testing 3,000 Photo-Multiplier Tubes, or 1/3 of the total, to be used in the ATLAS Tile Calorimeter.



Many other U.S. Institutions are involved in module/sub-module production, including ANL, University of Chicago, University of Texas and Michigan State University.

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The ATLAS Liquid Argon Electromagnetic Calorimeter barrel cryostat at CERN- a major U.S. deliverable from BNL, manufactured by Kawasaki. The installation of BNL-produced signal feedthrough's on one side is complete (including mechanical elements of High Voltage feedthrough's) and on the other side about a half of the feedthroughs have been installed. Signal feedthroughs are installed into the circular openings around the outer flanges.